npdγ Collaboration Meeting
TRIUMF
September 28, 2002

Here are supplementary notes made by Des while Shelley was out.

- **Spin Flipper:** I think this was solved during Greg's session on Sunday. We should first do a very accurate study of the spin flipper using the 3He analyzer. We then put in a Cl target and make an accurate calibration of that. Subsequently, we can do a quick check of the spin flipper at any time just by popping in the Cl target. How to pop it in was not decided. There was some discussion of whether La would be better, but no conclusion.

- **Paper:** Greg went over the paper. He has analyzed the data in a more thorough way than Chris. People should send their suggestions. Perhaps Greg should be the first author, since he has really done the writing.

- **Analysis:** There was discussion of how to extract $< A >$ from the distribution. An average is very sensitive to outliers and *one* bad event can shift the mean by a standard deviation. A fit to a histogram is much more stable, but we all agreed that information is lost in histogramming. We may be able to spot outliers by taking higher moments of the distribution. If outliers are spotted, we should see if there is some beam property that caused them and cut on the beam property. After all, if there is a bad event as an outlier, what's to say there is not a stinker hidden in the distribution. People seemed to really think we shouldn't cut on the A distribution itself.

  We should have two completely independent analysis teams. Greg said he tries to be a very careful worker and yet he has picked up mistakes he made himself. Who's to say there are not others. The same result from two *independent* teams would be an important confirmation.

  We need simulations to get the average $\cos(\theta)$ for our array. We also need, T, the neutron depolarization before capture. A Monte Carlo has been started at New Hampshire, but it is only, say, 2/3 complete.

- **Preamp Gains:** We will have to match photodiodes to CsI as well as possible and then fine-tune the preamp resistors to make the final gain correction.

- **Installation:** Roger presented a "linear" plan for installation which shows no removal of installed equipment. David will be updating his straw-man plan.

  We have to be able to go into the cave with Kevin's lasers on. This must be cleared with safety.

Kevin needs the coils in and mapped before he tests his cell in the cave. It is possible move the central coils up or down to make room for the installation, then slide them back. The field people should measure their dB/dx with the magnetometer to show it is less than 1 mG/cm before Kevin gets in.

The beam monitors should be tested and shown to work properly before we use them to check the neutron polarization produced by the 3He.

Apparently we can get thermal neutrons any time before the beam goes off. If there is anything to be gained by this we might ask for some time.

- **Next Meeting:** No date was set for the next meeting. Shelley was designated to take an email poll and find the best date.

Des Ramsay
30 September, 2002